Creating Resources –Quick Facts

What King County is doing

Reclaimed Water
250 million gallons of reclaimed water produced a year—enough drinking water conserved to fill 250 Olympic size swimming pools.

Energy Recovery
From waste gas to energy—6 megawatts of energy generation capacity or enough to fuel 6,000 homes for a year.

Biosolids
114,859 tons of biosolids were produced in 2005—enough nutrients to naturally fertilize 7,000 acres of farms and forests, and to make compost for landscaping and home gardens.

What you can do

Save 1,000 gallons of water a month!

No Cost: Wash only full loads of laundry and dishes.

Low cost: Install low flow shower heads and faucet aerators.
For more information:
http://dnr.metrokc.gov/wtd/waterconservation/

Prevent energy waste, save money!

No cost:
Turn off lights, electronics, small appliances and heat sources when not in use.

Low cost: Install compact fluorescent light bulbs—they use 1/3 the energy and last 10 times longer than traditional bulbs.
For more information:
http://www.earth911.org/master.asp?s=lib&a=Energy/energy.asp

Recycle nutrients!

No cost: Leave grass clippings on lawn and fallen leaves on gardens.

Low cost:
Compost food waste at home or add to yard waste bins—use compost made from recycled resources.
For more information:
http://www.metrokc.gov/dnrp/swd/composting/index.asp

A Clean Water Agency
Our mission is to protect public health and enhance the environment by treating and reclaiming water, recycling solids and generating energy.

This material is provided in alternative formats for individuals with disabilities on request by calling the Wastewater Treatment Division at 206-684-1280 or 711 TTY. 1202M

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Our Vision:
Creating Resources from Wastewater

King County is committed to recovering and reusing the products of the wastewater treatment process. Beneficially recycling the treated water, nutrient-rich biosolids and recovering energy from waste gasses, increases the efficiency of our wastewater treatment plants, conserves resources, protects the environment and saves money.

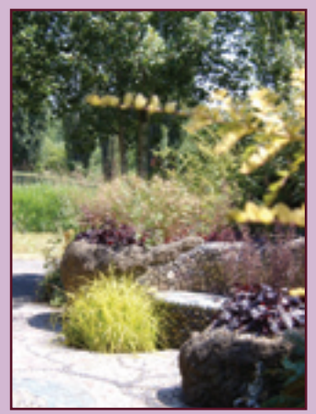
Some highly treated **reclaimed water** is used for irrigation and industrial processes.

All organic solids are treated and turned into **biosolids** for use in agriculture, forestry and landscaping.

The methane digester gas, a by-product of solids treatment, is used as an **energy source** to cogenerate electricity and heat for treatment plant processes.

King County
Department of
Natural Resources and Parks
Wastewater Treatment Division

Reclaimed Water



Reclaimed water is wastewater treated to such a high level it can be used safely for a variety of purposes that do not require drinking water. It is widely used in communities in the United States and throughout the world for:

- Irrigation—landscapes, nursery plants, golf courses, recreational fields, parks
- Growing vegetables for sale
- Industrial processes—making concrete, heating, cooling and cleaning
- Municipal services such as firefighting
- Habitat enhancement, wetland creation, restoration projects
- Groundwater recharge

Reclaimed water is available year round, even during dry summer months. Producing and using reclaimed water helps ensure that necessary water supplies will be available for people, fish, farms and industry in the future.

The Wastewater Treatment Division has been safely producing and using reclaimed water since the 1990s at its regional treatment plants in Renton and Seattle. Reclaimed water is disinfected and filtered beyond standard secondary biological treatment. It meets strict Class A standards set by the state departments of Ecology and Health.

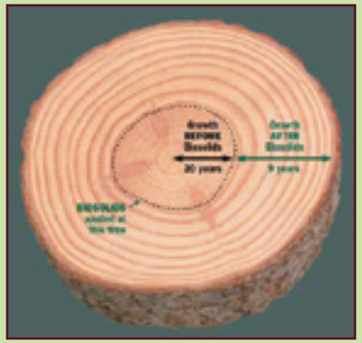
Water conservation and reclaimed water use benefits local salmon during dry months.

For more information *http://dnr.metrokc.gov/wtd/reuse*

Biosolids

Biosolids are the nutrient-rich organic product of the wastewater treatment process. After treatment, biosolids are beneficially added to agriculture and forest soils to:

- Improve soil health by adding organic matter
- Increase plant growth by slowly releasing essential nutrients
- Reduce erosion by retaining moisture and increasing plant growth



After solids are separated from wastewater, they are biologically decomposed in heated digester tanks for at least four weeks. After digestion, water is removed, leaving a soil-like product that can be recycled back into the earth's nutrient cycle.

King County uses biosolids to fertilize forests and agricultural crops. A portion of King County's biosolids are composted with sawdust for use in residential landscaping and gardening.

The Wastewater Treatment Division has been safely producing and using biosolids since the 1970s. King County is a member of the Northwest Biosolids Management Association which provides collaborative research, technical assistance and public information for biosolids managers in the region.

For more information *http://dnr.metrokc.gov/wtd/biosolids*

Using biosolids to fertilize agricultural crops increases early growth, prevents weeds, retains soil moisture and decreases the need for herbicides or chemical fertilizers.

Energy Recovery

During solids treatment, naturally occurring microorganisms break down the solid matter and produce digester gas which contains carbon dioxide and methane. This gas can be cleaned and used as fuel and converted to electricity and heat for treatment plant use or sold to Puget Sound Energy as natural gas for residential customers.

A fuel cell converts digester gas to electricity and heat for use on site at South Treatment Plant in Renton. Enough electricity is produced to fuel 1,000 homes for a year.

In addition to selling methane gas to Puget Sound Energy, King County has three different systems in place for using digester gas to fuel treatment plant processes:

- Internal combustion engines use digester gas to create power to run pumps and produce electricity.
- A fuel cell uses the hydrogen from digester gas and oxygen to produce an electrochemical reaction which creates low-emission, high-efficiency electricity and heat.
- Gas and steam turbines burn digester gas to create heat and steam which is then used to heat working spaces and create electricity.

King County has been developing its energy recovery program since 1985. Recently completed projects have been constructed to provide long-term, on-site energy security, demonstrate alternative 'green' energy technologies and increase the operating efficiency of the wastewater treatment plant.

For more information *http://dnr.metrokc.gov/wtd/energy*